WHAT IS CLAIMED IS:

1. A loudspeaker system for receiving an incoming electrical signal and transmitting an acoustical signal, the loudspeaker system comprising:

a driver circuit having an input with an input impedance, wherein the driver circuit comprises a first passive filter coupled to a first speaker driver and a second passive filter coupled to a second first speaker driver; and

a power amplifier having an input and an output with an output impedance that is between about 25 percent and about 400 percent of the input impedance of the driver circuit;

wherein the input of the power amplifier receives the incoming electrical signal, and the output of the power amplifier is coupled the input of the driver circuit.

2. The loudspeaker system of claim 1, wherein the first passive filter comprises an inductor and a capacitor.

3. The loudspeaker system of claim 1, wherein the second passive filter comprises an inductor and a capacitor.

4. The loudspeaker system of claim 1, wherein the first passive filter comprises a Butterworth filter.

5. The loudspeaker system of claim 4, wherein the first passive filter comprises a fourth-order filter.

6. The loudspeaker system of claim 1, wherein the first passive filter has an output characteristic termination impedance, the first speaker driver has a cold impedance, and the output characteristic termination impedance of the first passive filter is between about 25 percent and about 400 percent of the cold impedance of the first speaker driver.

7. The loudspeaker system of claim 6, wherein the second passive filter has an output characteristic termination impedance, the second speaker driver has a cold impedance, and the output characteristic termination impedance of the second passive filter is between about 25 percent and about 400 percent of the of the cold impedance of the second speaker driver.

8. The loudspeaker system of claim 1, wherein the power amplifier comprises a current-feedback amplifier.

9. The loudspeaker system of claim 1, wherein the power amplifier comprises a voltage source amplifier having a ballast resistor with a resistance between about 25 percent and about 400 percent of the input impedance of the driver circuit

10. The loudspeaker system of claim 1, wherein the first speaker driver has a cold impedance of about 4 Ohms, the first passive filter has an output characteristic termination impedance of about 4 Ohms, and the output impedance of the power amplifier is between about 1 Ohms and about 16 Ohms.

11. The loudspeaker system of claim 10, wherein the second speaker driver has a cold impedance of about 4 Ohms, the second passive filter has an output characteristic termination impedance of about 4 Ohms, and the output impedance of the power amplifier is between about 2 Ohms and about 8 Ohms.

12. The loudspeaker system of claim 1, wherein the first speaker driver has a cold impedance of about 8 Ohms, the first passive filter has an output characteristic termination impedance of about 8 Ohms, and the output impedance of the power amplifier is between 2 Ohms and 32 Ohms.

13. The loudspeaker system of claim 12, wherein the second speaker driver has a cold impedance of about 8 Ohms, the second passive filter has an output characteristic termination impedance of about 8 Ohms, and the output impedance of the power amplifier is between about 4 Ohms and about 16 Ohms.

14. The loudspeaker system of claim 1, further comprising an enclosure, wherein the driver circuit and the power amplifier are each affixed to the enclosure.

15. A method of constructing a loudspeaker system for receiving an incoming electrical signal and transmitting an acoustical signal, the method comprising:

selecting a first speaker driver having a first cold impedance;

selecting a second speaker driver having a second cold impedance;

constructing a first passive filter having an input and an output;

constructing a second passive filter having an input and an output;

coupling the output of the first passive filter to the first speaker driver so that the input of the first passive filter has a first combined cold impedance;

coupling the output of the second passive filter to the second speaker driver so that the input of the second passive filter has a second combined cold impedance;

forming a passive arrangement of the first speaker driver, the second speaker driver, the first passive filter and the second passive filter by coupling the input of the first passive filter to the input of the second passive filter, where the passive arrangement has an arrangement cold impedance;

constructing a power amplifier an input for receiving said incoming electrical signal and an output, where the output has an output impedance that is between about 25 percent and about 400 percent of the arrangement cold impedance; and

coupling the output of the power amplifier to the input of the first passive filter and to the input of the second passive filter.

16. The method of claim 15, wherein constructing the first passive filter comprises coupling an inductor to a capacitor

17. The method of claim 15, wherein constructing the second passive filter comprises coupling an inductor to a capacitor

18. The method of claim 15, wherein constructing the first passive filter comprises constructing a Butterworth filter

19. The method of claim 15, wherein constructing the power amplifier comprises constructing a current-feedback amplifier.

20. The method of claim 15, wherein constructing the power amplifier comprises constructing a voltage source amplifier and coupling a ballast resistor in series with the output of the power amplifier.

21. The method of claim 15, wherein selecting the first speaker driver comprises selecting a first speaker driver having a cold impedance of about 4 Ohms.

22. The method of claim 21, wherein constructing a power amplifier comprises constructing a power amplifier where the output has an output impedance that is between about 2 Ohms and about 8 Ohms.

23. The method of claim 15, wherein selecting the first speaker driver comprises selecting a first speaker driver having a cold impedance of about 8 Ohms

24. The method of claim 23, wherein constructing a power amplifier comprises constructing a power amplifier where the output has an output impedance that is between about 2 Ohms and about 16 Ohms.

25. The method of claim 15, further comprising constructing an enclosure, and mounting the first and second passive filters, the first and second speaker drivers, and the power amplifier to the enclosure.

26. A loudspeaker system for receiving an incoming electrical signal and transmitting an acoustical signal, the loudspeaker system comprising:

an amplification means for receiving said incoming electrical signal at an input and providing an amplified signal that is a function of the incoming electrical signal at an output that has an output impedance;

a first filter means for receiving the amplified signal at an input and providing a first filtered signal that is a function of the amplified signal at an output;

a second filter means for receiving the amplified signal at an input and providing a second filtered signal that is a function of the amplified signal at an output;

a first speaker driver coupled to the output of the first filter means, where the first speaker driver has a first cold impedance and is driven by the first filtered signal; and

a second speaker driver coupled to the output of the second filter means, where the second speaker driver is driven by the second filtered signal;

wherein the output impedance of the amplification means is between about 25 percent and about 400 percent of the first cold impedance.

27. The loudspeaker system of claim 26, wherein the amplification means comprises a current-feedback amplifier.

28. The loudspeaker system of claim 27, wherein the current-feedback amplifier has an output impedance between about 2 Ohms and about 16 Ohms.

29. The loudspeaker system of claim 26, wherein the first filter means has an output characteristic termination impedance, the first speaker driver has a cold impedance, and the output characteristic termination impedance of the first filter means is

between about 25 percent and about 400 percent of the cold impedance of the first speaker driver.

30. The loudspeaker system of claim 26, wherein the amplification means comprises a voltage source amplifier with a ballast resistor having a resistance between about 2 Ohms and about 16 Ohms.

31. A loudspeaker system for receiving an incoming electrical signal and transmitting an acoustical signal, the loudspeaker system comprising:

a driver circuit having a cold input impedance;

a current feedback amplifier having an output impedance that is substantially matched to the cold input impedance of the driver circuit; and

a speaker enclosure housing the driver circuit and the current feedback amplifier;

wherein the current feedback amplifier receives the incoming electrical signal and drives the driver circuit.

32. A method of operating a loudspeaker system that converts an incoming electrical signal to an acoustical signal, the method comprising:

operating a driver circuit in a temperature range so that an input impedance of the driver circuit is in an operational range;

configuring an output impedance of a current-feedback amplifier to be within the operational range of the input impedance of the driver circuit;

amplifying the incoming electrical signal with the current-feedback amplifier to produce a driving electrical signal; and

driving the driver circuit with the driving electrical signal.

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